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MOON, SEOKYUN	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/538,161	GRANT ET AL.	
	Examiner	Art Unit	
	Seokyun Moon	2629	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *27 August 2009*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16 and 19-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-16 and 19-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *08 June 2006* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *08/28/2009*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. The Applicant's arguments with respect to the limitation which is newly added to the independent claims 1, 5, 10, 13, 19, and 24 have been considered but are moot in view of the new ground(s) of rejection.

2. In the previous Office action, claims 10-13 (Claims 10 and 13 are independent claims.) have been rejected under 35 U.S.C. 101 as being directed to non-statutory subject matter.

Without any detailed arguments, the Applicant asserts that amending the claims to recite "*tangible computer readable storage medium*" would overcome the rejections. However, Examiner submits that the Applicant has amended only claim 13, but has failed to amend claim 10. Accordingly, the rejections of claim 10 and the claims depending on claim 10 under 35 U.S.C 101 are maintained.

Appropriate correction/explanation is required.

Claim Objections

3. Claims 5 and 24 are objected to because of the following informalities: typographical error.

Claim 5: "*outputting a control signal associated with the virtual touch signal to an actuator coupled to the **the** first communication device*" [the last three lines].

Claim 24: "*an actuator coupled to the **a** user-interface member and in communication with the processor.*." [lines 4-5]

Appropriate corrections are required.

Claim Rejections - 35 USC § 101

4. 35 U.S.C. 101 reads as follows:

> Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

5. **Claims 10-12** are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter. Claims 10-12 disclose, "*computer-readable storage medium*". The specification discloses a computer-readable medium and suggests a network or a channel, which is a non statutory subject matter, as the "*computer-readable media*",

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. **Claims 19** and **24** recite the limitation "*the apparatus*" in lines 10-11 of each of the claims. There is insufficient antecedent basis for this limitation in the claim.

For further examination purpose, the claim limitation will be construed as being the apparatus which is not the second apparatus, as best understood by Examiner.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

9. **Claims 1-16** and **19-30** are rejected under 35 U.S.C. 103(a) as being unpatentable over Kaaresoja (US 2002/0177471).

As to **claim 1**, Kaaresoja teaches a method, comprising:

receiving an input signal associated with a virtual touch at a first communication device (receiving a text message to which tactile icons are attached, at a mobile phone) [par. (0037) lines 1-2 and 8-10], the first communication device including a user-interface member (a portion of the exterior casing of the first mobile phone, which includes the inputting means of the mobile phone) and an actuator ("*vibration motor*") [par. (0045)], whereby the virtual touch originates from a second communication device (another mobile phone) [par. (0037) lines 1-2] operated by a user to communicate the virtual touch to the first communication device;

providing a control signal to the actuator, the control signal configured to cause the actuator to output a haptic effect associated with the virtual touch at the user-interface member [par. (0044)].

Kaaresoja does not expressly teach the method comprising outputting a request to initiate a contact with the user-interface member (the inputting means of the mobile phone) to receive the virtual touch at the first communication device (the mobile phone).

However, Examiner takes Official Notice that it is well known in the art that the display of a mobile phone outputs a request to initiate a contact with an user-interface member such as an inputting means of the mobile phone to open a text message from another mobile phone. In other words, it is common in the art that the display of a mobile phone displays/shows an icon or a message to inform the phone-user that a new message is arrived at the phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Kaaresoja to output a request to initiate a contact with the user-interface member at the first communication device when the first communication device receives a new text message from the second communication device, in order to inform the user of the first communication device that a new text message is arrived.

Kaaresoja as modified above teaches the method comprising providing a control signal to the actuator in response to the contact with the user-interface member because, in the method of Kaaresoja, the signal related to the virtual touch is attached to the text message and thus opening the icon/message to open the text message would activate the actuator by providing a signal to the actuator for the virtual touch.

As to **claim 2**, Kaaresoja teaches the method comprising extracting a haptic code from the input signal, the control signal being based at least in part of the haptic code [par. (0038)].

As to **claim 3**, Kaaresoja does not expressly teach that the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

However, Examiner takes Official Notice that it is well known in the art to use a touch screen as the inputting means of a mobile phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the user-interface member of Kaaresoja to include a touch screen, in order to remove the need of including the physical keys in the mobile phone and thus to simplify the structure of the mobile phone.

As to **claim 4**, Kaaresoja teaches that the virtual touch is associated with one of an engine idling, a tennis racquet, a slippery ice [fig, 12].

Kaaresoja does not teach that the virtual touch is associated with meanings between people [par. (0024) lines 5-9].

However, since the Applicant has failed to disclose that specifying the virtual touch being associated with a specific one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation provides an advantage, is used for a particular purpose, or solves a stated problem, it would be an obvious matter of design choice to use any one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to associate any haptic sensation to the virtual touch, including any

of the claimed haptic feedbacks, since any choice of feedback would provide the predictable result of delivering haptic feedback to the device user.

As to **claim 5**, Kaaresoja teaches a method, comprising:

receiving a virtual touch indicator (the text message containing the tactile icons) [par. (0037) lines 8-10] and a virtual touch signal (the signal for the tactile icons) at a first communication device (the mobile phone) [par. (0037) lines 1-2], whereby the virtual touch signal originates from a second communication device (another mobile phone) [par. (0037) lines 1-2] operated by a user to communicate the virtual touch to the first communication device; and

outputting a control signal associated with the virtual touch signal to an actuator ("*vibration motor*") [par. (0045)] coupled to the first communication device [par. (0044)].

Kaaresoja does not expressly teach the method comprising performing an initialization responsive to the virtual touch indicator on the first communication device.

However, Examiner takes Official Notice that it is well known in the art that the display of a mobile phone performs an initialization responsive to a received text message on the mobile phone. In other words, it is common in the art that the display of a mobile phone displays/shows an icon or a message when a new text message is arrived at the phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the method of Kaaresoja to perform initialization responsive to the virtual touch, i.e. a received text message, on the first communication

device, in order to inform the user of the first communication device that a new text message is arrived.

Kaaresoja as modified above teaches the method comprising outputting the control signal associated with the virtual touch to the actuator after performing initialization because, in the method of Kaaresoja, the signal related to the virtual touch is attached to the text message and thus opening the icon/message to open the text message would activate the actuator by providing a signal to the actuator for the virtual touch.

As to **claim 6**, Kaaresoja teaches that the actuator ("*vibration motor*") [par. (0045)] is configured to output a haptic effect to a user-interface member (a portion of the exterior casing of the first mobile phone, which includes the inputting means of the mobile phone) coupled to the first communication device.

As to **claim 7**, Kaaresoja does not expressly teach that the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

However, Examiner takes Official Notice that it is well known in the art to use a touch screen as the inputting means of a mobile phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the user-interface member of Kaaresoja to include a touch screen, in order to remove the need of including the physical keys in the mobile phone and thus to simplify the structure of the mobile phone.

As to **claim 8**, Kaaresoja as modified above teaches that the initialization includes outputting a request to initiate a contact with the user-interface member (displaying an icon/message indicating that a new text message is arrived at the mobile phone).

As to **claim 9**, Kaaresoja teaches that the virtual touch signal is associated with a manipulation of a remote user-interface member [par. (0045)].

As to **claim 10**, all of the claim limitation has already been discussed with respect to the rejection of claim 1 except for the method being performed by a data processing system which is caused by executable instructions contained in a computer-readable storage medium.

Kaaresoja teaches a computer-readable medium (the combination of the memories included in the mobile phones) [par. (0037) lines 1-2] containing executable instructions which cause a data processing system (the processors of the mobile phones) [par. (0037) lines 1-2] to perform the method.

As to **claim 11**, Kaaresoja teaches the computer-readable medium comprising extracting a haptic code from the input signal, the control signal being based at least in part on the haptic code [par. (0038) lines 4-8].

As to **claim 12**, Kaaresoja teaches that the virtual touch is associated with one of an engine idling, a tennis racquet, a slippery ice [fig, 12].

Kaaresoja does not teach that the virtual touch is associated with meanings between people [par. (0024) lines 5-9].

However, since the Applicant has failed to disclose that specifying the virtual touch being associated with a specific one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation provides an advantage, is used for a particular purpose, or solves a stated problem, it would be an obvious matter of design choice to use any one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to associate any haptic sensation to the virtual touch, including any of the claimed haptic feedbacks, since any choice of feedback would provide the predictable result of delivering haptic feedback to the device user.

As to **claim 13**, all of the claim limitation has already been discussed with respect to the rejection of claim 5 except for the method being performed by a data processing system which is caused by executable instructions contained in a tangible computer-readable storage medium.

Kaaresoja teaches a tangible computer-readable medium (the combination of the memories included in the mobile phones) [par. (0037) lines 1-2] containing executable instructions which cause a data processing system (the processors of the mobile phones) [par. (0037) lines 1-2] to perform the method.

As to **claim 14**, all of the claim limitation has already been discussed with respect to the rejection of claim 6.

As to **claim 15**, all of the claim limitation has already been discussed with respect to the rejection of claim 7.

As to **claim 16**, all of the claim limitation has already been discussed with respect to the rejection of claim 8.

As to **claim 19**, Kaaresoja teaches an apparatus ("*mobile phone*") [par. (0037) lines 1-2], comprising:

a user-interface member (a portion of the exterior casing of the mobile phone, which includes the inputting means of the mobile phone) coupled to a body;

a processor (the processor of the mobile phone);

an actuator ("*vibration motor*") [par. (0045)] coupled to the body and in communication with the processor; and

a memory in communication with the processor, the memory storing instructions configuring the processor to:

receive an input signal associated with a virtual touch at the apparatus (receiving a text message to which tactile icons are attached, at the mobile phone) [par. (0037) lines 1-2 and 8-10], whereby the virtual touch originates from a second apparatus (another mobile phone) [par. (0037) lines 1-2] operated by a user to communicate the virtual touch to the apparatus;

provide a control signal to the actuator, the control signal configured to cause the actuator to output a haptic effect associated with the virtual touch at the user-interface member [par. (0044)].

Kaaresoja does not expressly teach the processor outputting a request to initiate a contact with the user-interface member (the inputting means of the mobile phone) to receive the virtual touch at the first communication device (the mobile phone).

However, Examiner takes Official Notice that it is well known in the art that the display of a mobile phone outputs a request to initiate a contact with an user-interface member such as an inputting means of the mobile phone to open a text message from another mobile phone. In other words, it is common in the art that the display of a mobile phone displays/shows an icon or a message to inform the phone-user that a new message is arrived at the phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the processor of Kaaresoja to output a request to initiate a contact with the user-interface member at the first communication device when the first communication device receives a new text message from the second communication device, in order to inform the user of the first communication device that a new text message is arrived.

Kaaresoja as modified above teaches the method comprising providing a control signal to the actuator in response to the contact with the user-interface member because, in the method of Kaaresoja, the signal related to the virtual touch is attached to the text message and thus opening the icon/message to open the text message would activate the actuator by providing a signal to the actuator for the virtual touch.

As to **claim 20**, Kaaresoja teaches that the body is included in a handheld communication device (the mobile phone) [par. (0037) lines 1-2].

As to **claim 21**, Kaaresoja teaches that the handheld communication device includes one of a cellular phone [par. (0037) lines 1-2], a satellite phone, a cordless

phone, a personal digital assistant, a pager, a two-way radio, a portable computer, a game console controller, a personal gaming device, and an MP3 player.

As to **claim 22**, Kaaresoja does not expressly teach that the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

However, Examiner takes Official Notice that it is well known in the art to use a touch screen as the inputting means of a mobile phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the user-interface member of Kaaresoja to include a touch screen, in order to remove the need of including the physical keys in the mobile phone and thus to simplify the structure of the mobile phone.

As to **claim 23**, Kaaresoja teaches that the virtual touch is associated with one of an engine idling, a tennis racquet, a slippery ice [fig, 12].

Kaaresoja does not teach that the virtual touch is associated with meanings between people [par. (0024) lines 5-9].

However, since the Applicant has failed to disclose that specifying the virtual touch being associated with a specific one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation provides an advantage, is used for a particular purpose, or solves a stated problem, it would be an obvious matter of design choice to use any one of a handshake, a high-five, a pat on the back, a pulse sensation, a heartbeat sensation, and a pet purring sensation.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to associate any haptic sensation to the virtual touch, including any of the claimed haptic feedbacks, since any choice of feedback would provide the predictable result of delivering haptic feedback to the device user.

As to **claim 24**, Kaaresoja teaches an apparatus ("*mobile phone*") [par. (0037) lines 1-2], comprising:

a user-interface member (a portion of the exterior casing of the mobile phone, which includes the inputting means of the mobile phone);

a processor (the processor of the mobile phone);

an actuator ("*vibration motor*") [par. (0045)] coupled to the user-interface member and in communication with the processor; and

a memory in communication with the processor, the memory storing instructions configuring the processor to:

receive a virtual touch indicator the text message containing the tactile icons) [par. (0037) lines 8-10] and a virtual touch signal (the signal for the tactile icons), whereby the virtual touch signal originates from a second apparatus (another mobile phone) [par. (0037) lines 1-2] operated by a user to communicate the virtual touch to the apparatus;

output a control signal associated with the virtual touch signal to an actuator ("*vibration motor*") [par. (0045)].

Kaaresoja does not expressly teach the processor performing an initialization responsive to the virtual touch indicator on the first communication device.

However, Examiner takes Official Notice that it is well known in the art that the display of a mobile phone performs an initialization responsive to a received text message on the mobile phone. In other words, it is common in the art that the display of a mobile phone displays/shows an icon or a message when a new text message is arrived at the phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the processor of Kaaresoja to perform initialization responsive to the virtual touch, i.e. a received text message, on the first communication device, in order to inform the user of the first communication device that a new text message is arrived.

Kaaresoja as modified above teaches the processor outputting the control signal associated with the virtual touch to the actuator after performing initialization because, in the method of Kaaresoja, the signal related to the virtual touch is attached to the text message and thus opening the icon/message to open the text message would activate the actuator by providing a signal to the actuator for the virtual touch.

As to **claim 25**, Kaaresoja teaches that the user-interface member (a portion of the exterior casing of the mobile phone, which includes the inputting means of the mobile phone) is coupled to a handheld communication device [par. (0037) lines 1-2 and par. (0045)].

As to **claim 26**, Kaaresoja teaches that the handheld communication device includes one of a cellular phone [par. (0037) lines 1-2], a satellite phone, a cordless

phone, a personal digital assistant, a pager, a two-way radio, a portable computer, a game console controller, a personal gaming device, and an MP3 player.

As to **claim 27**, Kaaresoja does not expressly teach that the user-interface member includes one of a key, a button, a key pad, a direction pad, a touch screen, a scroll wheel, a mini-joystick, a trackball, and a knob.

However, Examiner takes Official Notice that it is well known in the art to use a touch screen as the inputting means of a mobile phone.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify the user-interface member of Kaaresoja to include a touch screen, in order to remove the need of including the physical keys in the mobile phone and thus to simplify the structure of the mobile phone.

As to **claim 28**, Kaaresoja as modified above teaches that the virtual touch signal (the signal for the tactile icons) is associated with a manipulation of a remote user-interface member [par. (0045)].

As to **claim 29**, Kaaresoja as modified above teaches that the virtual touch indicator (the text message containing the tactile icons) [par. (0037) lines 8-10] is one or more of a haptic code or a message.

As to **claim 30**, Kaaresoja as modified above teaches that the virtual touch indicator (the text message containing the tactile icons) [par. (0037) lines 8-10] is one or more of a haptic code or a message.

Conclusion

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Seokyun Moon whose telephone number is 571-272-5552. The examiner can normally be reached on 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sumati Lefkowitz can be reached on 572-272-3638. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

November 05, 2009
/S. M./
Examiner, Art Unit 2629

/Sumati Lefkowitz/
Supervisory Patent Examiner, Art Unit 2629